

Applicants: Thomas M. Jessell et al.
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REMARKS

Claims 1-3 are pending in the subject application. Applicants have hereinabove amended claim 1. Support for the amendment to claim 1 may be found inter alia in the specification on page 9, line 6; page 22, lines 11-15; and Figure 2D. These amendments do not involve any issue of new matter. Therefore, entry of this amendment is respectfully requested such that claims 1-3 will be pending and under examination.

In view of the amendments to the claims and the arguments set forth below, applicants maintain that the Examiner's rejection set forth in the March 13, 2006 Final Office Action has been overcome and respectfully request that the Examiner reconsider and withdraw same.

Obviousness-type Double Patenting Rejection

In the March 13, 2006 Final Office Action, the Examiner rejected claims 1-3 under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-3 of U.S. Patent No. 6,955,802. The Examiner stated that although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed method of converting a neural stem cell into a ventral neuron is obvious over the claimed neural stem cell of U.S. Patent No. 6,955,802.

The Examiner stated that claims 1-3 of the instant application are directed to a method of converting a neural stem cell into a V2 interneuron, which comprises introducing into the neural stem cell, *ex vivo*, a nucleic acid which encodes homeodomain transcription factor Nkx6.1 protein, wherein the encoded protein

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is expressed in the stem cell so as to thereby convert the neural stem cell into the V2 neuron.

The Examiner stated that claim 1 of parent case U.S. Patent No. 6,955,802 is directed to a neural stem cell which does not express homeodomain transcription factor Irx3 protein or homeodomain transcription factor Nkx2.2 protein comprising a retroviral expression system, wherein the retroviral expression system expresses homeodomain transcription factor Nkx6.1 protein.

The Examiner stated that the instantly claimed method of converting a neural stem cell into a V2 neuron is obvious over the neural stem cell because the claimed method is essentially a method of making the neural stem cell of claim 1 of parent case U.S. Patent No. 6,955,802. The Examiner stated that once the genetically modified neural stem cell is produced, expression of the Nkx6.1 protein converts the neural stem cell into a motor neuron. The Examiner stated that the claimed method, although reciting a V2 neuron, would also produce a motor neuron, within the scope of the claim.

The Examiner stated that although parent case that issued as U.S. Patent No. 6,955,802 contains a restriction requirement, claims directed to the neural stem cell and a method of generating a motor neuron by introducing an Nkx6.1 gene into a neural stem cell were not restricted apart. The Examiner stated that both the neural stem cell and the method were included in the invention of Group I.

In response, applicants respectfully traverse. Nevertheless, applicants without conceding the correctness of the Examiner's position and to expedite prosecution of the subject application

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have hereinabove amended claim 1 such that it recites "A method of converting a neural stem cell which expresses Chx10 into a V2 neuron...."

Applicants contend that the invention set forth in claims 1-3, as amended, in the instant application is patentably distinct from the invention claimed in U.S. Patent No. 6,955,802.

As the Examiner noted the neural stem cell claimed in U.S. Patent No. 6,955,802 necessarily produces a motor neuron.

Applicants respectfully point out that the claims of the instant application do not claim a motor neuron, but instead are directed to a "method of converting a neural stem cell which expresses Chx10 into a V2 neuron." As applicants describe in the subject specification, V2 interneurons are defined by expression of Chx10 (see page 22, lines 13-15), i.e. Chx10 is expressed only in V2 interneurons.

Accordingly, applicants maintain that the invention set forth in claims 1-3 of the instant application is patentably distinct from and not obvious over the claimed neural stem cell of U.S. Patent No. 6,955,802. Therefore, applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection.

In view of the amendments and remarks made herein, applicants maintain that the claims pending in this application are in condition for allowance. Accordingly, allowance is respectfully requested.

No fee, other than the enclosed \$395.00 RCE filing fee, is deemed necessary in connection with the filing of this Preliminary

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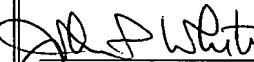
Amendment. However, if any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

 9/12/06
John P. White Date
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